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0590  
1023  
P.5 #4

OICE

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/886,055

DATE: 10/10/2001

TIME: 14:10:06

Input Set : D:\78277150.app

Output Set: N:\CRF3\10102001\I886055.raw

ENTERED

3 <110> APPLICANT: STRYER, LUBERT  
 4 ZOZULYA, SERGEY  
 6 <120> TITLE OF INVENTION: RECEPTOR FINGERPRINTING, SENSORY PERCEPTION, AND  
 7 BIOSENSORS OF CHEMICAL SENSANTS  
 9 <130> FILE REFERENCE: 078003-0277150  
 11 <140> CURRENT APPLICATION NUMBER: 09/886,055  
 12 <141> CURRENT FILING DATE: 2001-06-22  
 14 <150> PRIOR APPLICATION NUMBER: 60/213,812  
 15 <151> PRIOR FILING DATE: 2000-06-22  
 17 <160> NUMBER OF SEQ ID NOS: 522  
 19 <170> SOFTWARE: PatentIn Ver. 2.1  
 21 <210> SEQ ID NO: 1  
 22 <211> LENGTH: 325  
 23 <212> TYPE: PRT  
 24 <213> ORGANISM: Homo sapiens  
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 28 1 5 10 15  
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 31 20 25 30  
 33 Gln Asp Glu His Gln Asn Leu Leu Phe Val Leu Phe Leu Gly Met Tyr  
 34 35 40 45  
 36 Leu Val Thr Val Ile Gly Asn Gly Leu Ile Ile Val Ala Ile Ser Leu  
 37 50 55 60  
 39 Asp Thr Tyr Leu His Thr Pro Met Tyr Leu Phe Leu Ala Asn Leu Ser  
 40 65 70 75 80  
 42 Phe Ala Asp Ile Ser Ser Ile Ser Asn Ser Val Pro Lys Met Leu Val  
 43 85 90 95  
 45 Asn Ile Gln Thr Lys Ser Gln Ser Ile Ser Tyr Glu Ser Cys Ile Thr  
 46 100 105 110  
 48 Gln Met Tyr Phe Ser Ile Val Phe Val Val Ile Asp Asn Leu Leu Leu  
 49 115 120 125  
 51 Gly Thr Met Ala Tyr Asp His Phe Val Ala Ile Cys His Pro Leu Asn  
 52 130 135 140  
 54 Tyr Thr Ile Leu Met Arg Pro Arg Phe Gly Ile Leu Leu Thr Val Ile  
 55 145 150 155 160  
 57 Ser Trp Phe Leu Ser Asn Ile Ile Ala Leu Thr His Thr Leu Leu Leu  
 58 165 170 175  
 60 Ile Gln Leu Leu Phe Cys Asn His Asn Thr Leu Pro His Phe Phe Cys  
 61 180 185 190  
 63 Asp Leu Ala Pro Leu Leu Lys Leu Ser Cys Ser Asp Thr Leu Ile Asn  
 64 195 200 205  
 66 Glu Leu Val Leu Phe Ile Val Gly Leu Ser Val Ile Ile Phe Pro Phe  
 67 210 215 220  
 69 Thr Leu Ser Phe Phe Ser Tyr Val Cys Ile Ile Arg Ala Val Leu Arg  
 70 225 230 235 240  
 72 Val Ser Ser Thr Gln Gly Lys Trp Lys Ala Phe Ser Thr Cys Gly Ser



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73          245          250          255
75 His Leu Thr Val Val Leu Leu Phe Tyr Gly Thr Ile Val Gly Val Tyr
76          260          265          270
78 Phe Phe Pro Ser Ser Thr His Pro Glu Asp Thr Asp Lys Ile Gly Ala
79          275          280          285
81 Val Leu Phe Thr Val Val Thr Pro Met Ile Asn Pro Phe Ile Tyr Ser
82          290          295          300
84 Leu Arg Asn Lys Asp Met Lys Gly Ala Leu Arg Lys Leu Ile Asn Arg
85 305          310          315          320
87 Lys Ile Ser Ser Leu
88          325
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92 <211> LENGTH: 978
93 <212> TYPE: DNA
94 <213> ORGANISM: Homo sapiens
96 <400> SEQUENCE: 2
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98 accatcactg aattcattct cctgggattt ttcaagcagg atgagcatca aaacctcctc 120
99 tttgtgcttt tcttgggtat gtacctggtc actgtgattg ggaacgggct catcattgtg 180
100 gctatcagct tggatacgta ccttcatacc cccatgtatc tcttccttgc caatctatcc 240
101 tttgtctgata tttcctccat ttccaactca gtcccaaaaa tgctgggtgaa tattcaaacc 300
102 aagagtcaat ccatctctta tgagagctgc atcacacaga tgtacttttc tattgtgttt 360
103 gtogtcattg acaatttgc tttggggacc atggcctatg accactttgt ggcgatctgc 420
104 caccctctga attatacaat tctcatgccc cccagggttcg gcattttgct cacagtcac 480
105 tcatggttcc tcagtaatat tattgtcttg acacacaccc ttctgctcat tcaattgctc 540
106 ttctgtaacc acaacactct cccacacttc ttctgtgact tggccctctc gctcaaactg 600
107 tctgtttcag atacattgat caatgagctt gtgttggtta ttgtgggttt atcagttatc 660
108 atcttccctt ttacactcag cttcttttcc tatgtctgca tcatcagagc tgtcctgaga 720
109 gtatcttcca cacagggaac gtggaaagcc ttctccactt gtggctctca cctgacagtt 780
110 gtattactgt tctacggaac cattgtaggg gtgtactttt tccctcctc cactcaccct 840
111 gaggacactg ataagattgg tgctgtccta ttactgtgg tgacacccat gataaacccc 900
112 ttcattctaca gcttgaggaa taaggatatg aaagggtgcc tgagaaagct catcaataga 960
113 aaaatttctt ccctttga 978
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117 <211> LENGTH: 314
118 <212> TYPE: PRT
119 <213> ORGANISM: Homo sapiens
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125 Leu Gly Phe Thr Asp Tyr Pro Lys Leu Gln Ile Pro Leu Phe Leu Val
126 20 25 30
128 Phe Leu Leu Met Tyr Val Ile Thr Val Val Gly Asn Leu Gly Met Ile
129 35 40 45
131 Ile Ile Ile Lys Ile Asn Pro Lys Phe His Thr Pro Met Tyr Phe Phe
132 50 55 60
134 Leu Ser His Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Val Thr
135 65 70 75 80
137 Pro Lys Leu Leu Glu Asn Leu Val Met Ala Asp Lys Ser Ile Phe Tyr

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138          85          90          95
140 Phe Ser Cys Met Met Gln Tyr Phe Leu Ser Cys Thr Ala Val Val Thr
141          100          105          110
143 Glu Ser Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile
144          115          120          125
146 Cys Asn Pro Leu Leu Tyr Thr Val Ala Met Ser Gln Arg Leu Cys Ala
147          130          135          140
149 Leu Leu Val Ala Gly Ser Tyr Leu Trp Gly Met Phe Gly Pro Leu Val
150 145          150          155          160
152 Leu Leu Cys Tyr Ala Leu Arg Leu Asn Phe Ser Gly Pro Asn Val Ile
153          165          170          175
155 Asn His Phe Phe Cys Glu Tyr Thr Ala Leu Ile Ser Val Ser Gly Ser
156          180          185          190
158 Asp Ile Leu Ile Pro His Leu Leu Leu Phe Ser Phe Ala Thr Phe Asn
159          195          200          205
161 Glu Met Cys Thr Leu Leu Ile Ile Leu Thr Ser Tyr Val Phe Ile Phe
162          210          215          220
164 Val Thr Val Leu Lys Ile Arg Ser Val Ser Gly Arg His Lys Ala Phe
165 225          230          235          240
167 Ser Thr Trp Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr
168          245          250          255
170 Ile Leu Phe Leu Tyr Cys Val Pro Asn Ser Lys Asn Ser Arg Gln Thr
171          260          265          270
173 Val Lys Val Ala Ser Val Phe Tyr Thr Val Val Asn Pro Met Leu Asn
174          275          280          285
176 Pro Pro Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Ala Phe Trp
177          290          295          300
179 Lys Leu Ile His Thr Gln Val Pro Phe His
180 305          310

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183 &lt;210&gt; SEQ ID NO: 4

184 &lt;211&gt; LENGTH: 945

185 &lt;212&gt; TYPE: DNA

186 &lt;213&gt; ORGANISM: Homo sapiens

188 &lt;400&gt; SEQUENCE: 4

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190 gattacccaa agcttcagat tcctctcttc ctgtgttttc tgctcatgta tgttatcaca 120
191 gtggtaggaa accttgggat gatcataata atcaagatta accccaaatt tcacactcct 180
192 atgtactttt tccttagtca cctctctttt gttgattttt gttactcttc cattgtcact 240
193 cccaagctgc ttgagaactt ggtaatggca gataaaagca tcttctactt tagctgcatg 300
194 atgcagtact tcctgtcctg cactgctgtg gtgacagagt ctttcttgct ggcagtgatg 360
195 gcctatgacc gctttgtggc catctgcaat cctctgcttt atacagtggc catgtcacag 420
196 aggcctctgt ccctgtctgt ggtctgggtca tatctctggg gcatgttttg ccccttggtg 480
197 ctccctttgt atgtctctcg gttaaacttc tctggacctt atgtaataaa ccacttcttt 540
198 tgtgagtata ctgtctctat ctctgtgtct ggctctgata tactcatccc ccacctgctg 600
199 cttttcagct tcgccacctt caatgagatg tgtacactac tgatcatcct cacttcttat 660
200 gttttcattt ttgtgactgt actaaaaatc cgttctgtta gtgggcgcca caaagccttc 720
201 tccacctggg cctccacctg gactgctatc accatcttcc atgggacctc ccttttcctt 780
202 tactgtgtac ccaactccaa aaactctcgg caaacagtca aagtggcctc tgtattttac 840
203 acagttgtca acccatgct gaacctctcg atctacagcc taaggaataa agacgtgaag 900

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Input Set : D:\78277150.app

Output Set: N:\CRF3\10102001\I886055.raw

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207 <210> SEQ ID NO: 5
208 <211> LENGTH: 313
209 <212> TYPE: PRT
210 <213> ORGANISM: Homo sapiens
212 <400> SEQUENCE: 5
213 Met Leu Leu Thr Asp Arg Asn Thr Ser Gly Thr Thr Phe Thr Leu Leu
214   1           5           10           15
216 Gly Phe Ser Asp Tyr Pro Glu Leu Gln Val Pro Leu Phe Leu Val Phe
217           20           25           30
219 Leu Ala Ile Tyr Asn Val Thr Val Leu Gly Asn Ile Gly Leu Ile Val
220   35           40           45
222 Ile Ile Lys Ile Asn Pro Lys Leu His Thr Pro Met Tyr Phe Phe Leu
223   50           55           60
225 Ser Gln Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Ile Ala Pro
226   65           70           75           80
228 Lys Met Leu Val Asn Leu Val Val Lys Asp Arg Thr Ile Ser Phe Leu
229           85           90           95
231 Gly Cys Val Val Gln Phe Phe Phe Phe Cys Thr Phe Val Val Thr Glu
232   100          105          110
234 Ser Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys
235   115          120          125
237 Asn Pro Leu Leu Tyr Thr Val Asp Met Ser Gln Lys Leu Cys Val Leu
238   130          135          140
240 Leu Val Val Gly Ser Tyr Ala Trp Gly Val Ser Cys Ser Leu Glu Leu
241 145          150          155          160
243 Thr Cys Ser Ala Leu Lys Leu Cys Phe His Gly Phe Asn Thr Ile Asn
244   165          170          175
246 His Phe Phe Cys Glu Phe Ser Ser Leu Leu Ser Leu Ser Cys Ser Asp
247   180          185          190
249 Thr Tyr Ile Asn Gln Trp Leu Leu Phe Phe Leu Ala Thr Phe Asn Glu
250   195          200          205
252 Ile Ser Thr Leu Leu Ile Val Leu Thr Ser Tyr Ala Phe Ile Val Val
253   210          215          220
255 Thr Ile Leu Lys Met Arg Ser Val Ser Gly Arg Arg Lys Ala Phe Ser
256 225          230          235          240
258 Thr Cys Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr Ile
259   245          250          255
261 Leu Phe Leu Tyr Cys Val Pro Asn Ser Lys Asn Ser Arg His Thr Val
262   260          265          270
264 Lys Val Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro
265   275          280          285
267 Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Thr Val Thr Glu
268   290          295          300
270 Ile Leu Asp Thr Lys Val Phe Ser Tyr
271 305          310
274 <210> SEQ ID NO: 6
275 <211> LENGTH: 942
276 <212> TYPE: DNA

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Input Set : D:\78277150.app

Output Set: N:\CRF3\10102001\I886055.raw

277 &lt;213&gt; ORGANISM: Homo sapiens

279 &lt;400&gt; SEQUENCE: 6

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280 atgctgctga cagatagaaa tacaagtggg accacgttca cctcttggg cttctcagat 60
281 taccacagaac tgcaagtccc actcttctctg gtttttctgg ccatctacaa tgtcactgtg 120
282 ctagggaata ttgggttgat tgtgatcatc aaaatcaacc ccaaactgca taccctcatg 180
283 tactttttcc tcagccaact ctcttttctg gatttctgct attctcccat cattgtctcc 240
284 aagatgttgg tgaaccttgt tgtcaaagac agaaccattt catttttagg atgcgtagta 300
285 caattctttt tcttctgtac ctttgtggtc actgaatcct ttttattagc tgtgatggcc 360
286 tatgaccgct tctgtggccat ttgcaaccct ctgctctaca cagttgacat gtcccagaaa 420
287 ctctgcgtgc tctgtggtgt gggatcctat gcctggggag tctcatgttc cttggaactg 480
288 acgtgctctg ctttaaagtt atgttttcat ggttcaaca caatcaatca cttcttctgt 540
289 gagttctcct cactactctc ctttcttgc tctgatactt acatcaacca gtggctgcta 600
290 ttctttcttg ccacctttaa tgaaatcagc acactactca tcttctcac atcttatgcg 660
291 ttcattgttg taaccatcct caagatgcgt tcagtcagtg ggcgcgcgaa agccttctcc 720
292 acctgtgcct cccacctgac tgccatcacc atcttccatg gcaccatcct ctctctttac 780
293 tgtgtgcca actccaaaaa ctccaggcac acagtcaaag tggcctctgt gttttacacc 840
294 gtggtgatcc ccatgttgaa tcccctgac tacagtctga gaaataaaga tgtcaaggat 900
295 acagtcaccg agatactgga caccaaagtc ttctcttact ga 942

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298 &lt;210&gt; SEQ ID NO: 7

299 &lt;211&gt; LENGTH: 309

300 &lt;212&gt; TYPE: PRT

301 &lt;213&gt; ORGANISM: Homo sapiens

303 &lt;400&gt; SEQUENCE: 7

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304 Met Glu Asn Gln Asn Asn Val Thr Glu Phe Ile Leu Leu Gly Leu Thr
305 1 5 10 15
307 Glu Asn Leu Glu Leu Trp Lys Ile Phe Ser Ala Val Phe Leu Val Met
308 20 25 30
310 Tyr Val Ala Thr Val Leu Glu Asn Leu Leu Ile Val Val Thr Ile Ile
311 35 40 45
313 Thr Ser Gln Ser Leu Arg Ser Pro Met Tyr Phe Phe Leu Thr Phe Leu
314 50 55 60
316 Ser Leu Leu Asp Val Met Phe Ser Ser Val Val Ala Pro Lys Val Ile
317 65 70 75 80
319 Val Asp Thr Leu Ser Lys Ser Thr Thr Ile Ser Leu Lys Gly Cys Leu
320 85 90 95
322 Thr Gln Leu Phe Val Glu His Phe Phe Gly Gly Val Gly Ile Ile Leu
323 100 105 110
325 Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
326 115 120 125
328 His Tyr Thr Ile Ile Met Ser Pro Arg Val Cys Cys Leu Met Val Gly
329 130 135 140
331 Gly Ala Trp Val Gly Gly Phe Met His Ala Met Ile Gln Leu Leu Phe
332 145 150 155 160
334 Met Tyr Gln Ile Pro Phe Cys Gly Pro Asn Ile Ile Asp His Phe Ile
335 165 170 175
337 Cys Asp Leu Phe Gln Leu Leu Thr Leu Ala Cys Thr Asp Thr His Ile
338 180 185 190
340 Leu Gly Leu Leu Val Thr Leu Asn Ser Gly Met Met Cys Val Ala Ile
341 195 200 205

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Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.



## VERIFICATION SUMMARY

PATENT APPLICATION: US/09/886,055

DATE: 10/10/2001

TIME: 14:10:07

Input Set : D:\78277150.app

Output Set: N:\CRF3\10102001\I886055.raw

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L:2009 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43  
L:2012 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43  
L:2015 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43  
L:2033 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43  
L:2036 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43  
L:2113 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44  
L:2114 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44  
L:2115 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44  
L:2120 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44  
L:2121 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44  
L:2537 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:53  
L:2543 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:53  
L:2604 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54  
L:2605 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54  
L:2742 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:57  
L:2805 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:58  
L:4139 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:87  
L:4217 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:88  
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L:13403 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:284  
L:13465 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:285  
L:13507 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:286  
L:24182 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:513  
L:24214 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:515  
L:24243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:516  
L:24266 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:517  
L:24289 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:518  
L:24312 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:519  
L:24335 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:520  
L:24358 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:521  
L:24381 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:522